



UNITED STATES PATENT AND TRADEMARK OFFICE

H.A

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/843,630

04/27/2001

Kazuo Nishiyama

09792909-4983

9204

33448

7590

11/13/2006

ROBERT J. DEPKE
LEWIS T. STEADMAN
ROCKEY, DEPKE, LYONS AND KITZINGER, LLC
SUITE 5450 SEARS TOWER
CHICAGO, IL 60606-6306

EXAMINER

MITCHELL, JAMES M

ART UNIT

PAPER NUMBER

2813

DATE MAILED: 11/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/843,630

Applicant(s)

NISHIYAMA, KAZUO

Examiner

James M. Mitchell

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4,8 and 9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4,8 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/28/2006.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

This office action is in response to applicant's amendment filed August 9, 2006.

Claim Rejections - 35 USC § 112

Claims 4, 8 and 8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant's Figure 1H shows a passivation layer, 12, on the top surface of the chip that provides protection for underlying layers. Thus applicant's invention does in fact provide a protection layer on a top surface of the chip albeit of a different material than the side surfaces.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 4 is rejected under 35 U.S.C. 102(b) as being anticipated by Dando (U.S. 5,863,813).

Dando (Fig. 6, 8) discloses an intermediate semiconductor device fabrication structure or pseudo wafer comprising: an electronic chip component (20) having all

Art Unit: 2813

electrodes (26) formed above and therefor on one surface thereof, side walls (not labeled; perpendicular to surface with contacts) thereof being covered with a protective material (38 on 32b) and wherein there is substantially no protective material (e.g. top surface is substantially free from protective material) located on one surface of the chip where all the electrodes are secured, with solder bumps (28) on each electrode, with back surface of chip and protective material at a common level secured to a dicing tape (14).

With respect to the process limitations in claims 4 and 8, such as “protective material...grinded or polished to a common level” and “...chip components are not originally form the same semiconductor wafer,” the prior art product is the same as the claimed invention including the single chip package that has the bottom of protective material and chip planar.. “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

With respect to the preamble, the claims following the preamble are self contained. As such, the recitation of pseudo wafer has not been given patentable weight, because it has been held that a preamble is denied the affect of a limitation where the claim following the preamble is a self-contained description of the structure

Art Unit: 2813

not depending for completeness upon the introductory clause. *Kropa v. Robie*, 88 USPQ 478 (CCPA 1951).

Claims 4, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Eichelberger (U.S. 5,841,193).

Eichelberger (Fig. 5e, 10) discloses an intermediate semiconductor device fabrication structure comprising: an electronic chip component (502) having all electrodes (504, 110) formed above and therefor on one surface thereof, side walls (not labeled; perpendicular to surface with contacts) thereof being covered with a protective material (506) and wherein there is neither substantially or no protective material¹ (e.g., item 506 only on sides) located on one surface of the chip where all the electrodes are secured, with solder bumps (510) on each electrode, with back surface of chip and protective material at a common level attached to a dicing sheet (e.g. chips removed from sheet, (140).

With respect to the process limitations, such as "electrodes... secured to adhesive," "protective material...grinded or polished to a common level" and "...chip diced at a position of said protective material," the prior art product is the same as the claimed invention including the single chip package that has the bottom of protective material and chip planar. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in

Art Unit: 2813

the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

With respect to the preamble, the claims following the preamble are self contained. As such, the recitation of pseudo wafer has not been given patentable weight, because it has been held that a preamble is denied the affect of a limitation where the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. *Kropa v. Robie*, 88 USPQ 478 (CCPA 1951).

Response to Arguments

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection. However in an effort to expedite prosecution, examiner has addressed limitations that may still be relevant.

Applicant contends that prior art is directed to a different technology. Examiner is unpersuaded. As mentioned in M.P.E.P 2131.05 [R-5] quoting State Contracting & Eng'g Corp. v. Condotte America, Inc., 346 F.3d 1057, 1068, 68 USPQ2d 1481, 1488 (Fed. Cir. 2003) (The question of whether a reference is analogous art is not relevant to whether that reference anticipates. A reference may be directed to an entirely different problem than the one addressed by the inventor, or may be from an entirely different

¹ In contrast to applicant's claim, applicant's chip has a passivation layer, 12, which is a protective layer on a surface with its electrodes. See App. Drawing Fig. 1J.

Art Unit: 2813

field of endeavor than that of the claimed invention, yet the reference is still anticipatory if it explicitly or inherently discloses every limitation recited in the claims).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Mitchell whose telephone number is (571) 272-1931. The examiner can normally be reached on M-F 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ex. Mitchell J.D.
November 6, 2006


CARL WHITEHEAD, JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800